

Technical Data:

Issued: June 2011

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EP 140FR-520/EPC 1455

High Thermal Conductivity Epoxy Compound

Product Description

EP 140FR-520 is a potting/encapsulating epoxy compound, which meets UL 94-V-0 standard, performs high thermal conductivity, high chemical resistance and excellent mechanical and electrical properties. Various hardeners can be used to cure EP 140FR-520, depending on customer's requirements.

Features & Benefits

- High thermally conductive
- Complies to UL 94-V-0 standard
- RT cured
- Low thermal expansion
- Excellent insulating properties
- Low linear shrinkage

Applications

Encapsulation of electrical and electronic devices and components, where high heat dissipation and low thermal expansion are needed

Typical Uncured Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

	EP 140FR-520 (base)	EPC 1455 (hardener)
Appearance/Color	black	amber
Density, g/cm³	2.2	1.0
Viscosity @25°C, mPa*s	40000 - 60000	1000-1500
Mix Ratio, (by weight)	100:7.5	
Mixed Viscosity @25°C, mPa*s	16000-24000	

Instructions for use:

Warm EP 140FR-520 to 40-50°C and stir contents thoroughly before withdrawing material.

Weigh required amount of resin and hardener into a clean container in the recommended ratio. Blend thoroughly being careful to scrape sides and bottom of the container for 3-4 minutes to ensure uniform mixture.

To produce a void-free casting the mixture should be de-airing at 2-5 mmHg for 5-8 minutes to remove trapped air.

Pour the mixture into mold.

Preheating the mold reduces viscosity of the mixture and improves its flow.

Further de-airing in the mold may be required.

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Processing	Pot-life , 100g @ 25°C, min	20-35
	Gel-time , 100g @ 25°C, min	47
	Curing * @ 25°C, hr	24
Typical Cured Properties	Hardness , ASTM-D-2240, Shore D	85
	Tensile Strength , ASTM-D-638, MPa	41
	Tensile Elongation , ASTM-D-638, %	0.6
	Flexural Strength , ASTM-D-790, MPa	85
	Flexural Modulus , ASTM-D-790, MPa	8200
	Linear Shrinkage , %	0.16
	HDT , ISO-75, °C	88

*) Post-curing at 100-120°C for 2-4hr is recommended to achieve final properties

Storage

The shelf life of the EP 140FR-520 is 12 months at 16-35°C.
For the best results, store in tightly closed original containers.

Packaging

Packaging sizes are available from 0.5L to 25L containers

Limitation of Liability

Except where prohibited by law, Polymer-G and seller will not be liable for any loss or damage arising from the Polymer-G product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.